144. (New) The method of claim 87 wherein the chimeric polynucleotide consists of the nucleic acid sequence of SEQ ID NO. 7.

REMARKS

Applicants thank the Examiner for his time, comments and suggestions during the interview held on January 23, 2003. The amendments presented herein are believed to be consistent with the discussions during the interview. Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons which follow.

A. Amendments.

The Specification is amended to correct typographical errors in spelling and trademark usage. No new matter is added by any of the amendments.

After amending the claims as set forth above, claims 87, 93-95, 97-100, 111, 113, 116 and 141-144 are now pending in this application. Claims 94, 97, 98, 100 and 141-144 are species directed to chimeric polynucleotides in which the murine component is Domain I, Domain II, Domain III or Domain IV. Although Applicants have elected the species in which the murine component is Domain IV, the non-elected species fall within the scope of generic Claim 87, which is believed to be allowable. Allowance of Claims 94, 97, 98, 100 and 141-144, on allowance of base claim 87, is therefore requested.

No new matter has been added by any of the claim amendments, whose entry is therefore requested.

B. Support for "Murine" Limitation.

As to Claim 87, the Examiner raised a question during the interview of January 23, 2003, concerning support for use of the term "murine" in the claims (as opposed to "mouse"). As noted in the Specification, there is a substantially amount of sequence homology among murine CD40 strains, such that one of ordinary skill in the art can easily

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derive one from another; e.g., through hybridization under low stringency conditions. Specification at page 25, lines 13-25. Thus, the scope of the claimed invention need not be limited to the use of the exemplified mouse CD40 sequence. Allowance of Claim 87, as presently written, is therefore requested.

C. Response to Rejection of Claims 87-90, 92-109, 111, 113-115 and 137-140, under Section 112, first paragraph (written description).

Applicants have amended the claims to correct the confusion noted by the Examiner with respect to the use of the term any "CD40 ligand receptor." The claims have also been amended to be directed to use one or more domains of the *murine* CD40 molecule as the "non-human" part of the chimeric molecule claimed. As discussed during the January 23, interview, Applicants respectfully submit that these amendments obviate the claims rejection under Section 112, first paragraph. Reconsideration and withdrawal of the rejection is therefore requested.

D. Response to Rejection of Claims 87-90, 92-109, 111, 113-115 and 137-140, under Section 112, first paragraph (enablement).

Applicants have amended the claims to correct the confusion noted by the Examiner with respect to the use of the term any "CD40 ligand receptor." The claims have also been amended to be directed to use one or more domains of the *murine* CD40 molecule as the "non-human" part of the chimeric molecule claimed. As discussed during the January 23, interview, Applicants respectfully submit that these amendments obviate the claims rejection under Section 112, first paragraph. Reconsideration and withdrawal of the rejection is therefore requested.

E. Response to Rejection of Claims 87-90, 92-109, 111, 113-115 and 137-140, under Section 112, second paragraph.

Applicants have amended the claims to correct the confusion noted by the Examiner with respect to the use of the term "subdomain." The claims have also been amended to be directed to use one or more domains of the *murine* CD40 molecule as the "non-human" part of the chimeric molecule claimed. Because the four domains of murine

CD40 are fully described in the Specification (see, e.g., page 31, Table I; and page 32, line 1 through page 34, line 28 (illustrating various combinations of the four domains with elements of the human CD40 molecule), Applicants respectfully submit that the term "domains" as used with respect to murine CD40 is definite.

As to the term "encoded CD40 ligand" in Claims 90, 92-102 and 111, base claim 90 has been cancelled, and the remaining claims that depended from it amended to depend from other claims. Applicants respectfully submit that this amendment renders the objection to the "encoded CD40 ligand" term moot.

As to the appearance of a limitation drawn to the human CD40 molecule twice in Claims 108-109, 111 and 113-114, Applicants have amended the uncancelled claims to be directed to use one or more domains of the *murine* CD40 molecule, in combination with elements of the human CD40 molecule. Applicants respectfully submit that this amendment corrects the ambiguity in the claims, and request that the rejection as applied to pending Claims 111 and 113 be withdrawn.

F. Response to Rejection of Claims 108-109 under Section 102(e), over Maraskovsky.

Claims 108-109 have been cancelled, as drawn to a non-elected species. Applicants therefore submit that their rejection under 102(e) is now moot.

G. Response to Rejection of Claims 108-109, 111, and 113-114 under Section 103, over Freeman, in view of Yellin, *et al.*, Alderson, *et al.*, Spriggs, Maraskovsky and pages 40-53 of the present Specification.

Claims 108-109 and 114 have been cancelled, as drawn to a non-elected species, or as redundant. As to Claims 111 and 113, neither now includes the limitations of Claim 108, drawn to use of human CD40. As such, Applicants respectfully submit that the rejection of Claims 111 and 113 under 103 is now moot, and request that the rejection be reconsidered and withdrawn.

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CONCLUSION

As discussed during the January 23, 2003 interview, Applicants respectfully submit that these amendments obviate the outstanding claims rejections. Reconsideration and withdrawal of the rejections is therefore requested.

Applicants believes that the present application will be in condition for allowance on submission of the required drawing corrections, by or before March 3, 2003. In the interim, favorable reconsideration of the application as presently amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

Date 2-9-03

By Stacy L Taylor

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MARKED UP VERSION SHOWING CHANGES MADE

Below are the marked up replacements to the Specification:

Page 47, line 18, the sentence beginning "The fibroblasts" is amended by the replacement as follows:

--The fibroblasts are then injected into the treatment site and cause the desired [immuno] immune effect due to the presence of the accessory molecule ligand on the surface of those cells.--

Page 101, line 17, the sentence beginning "Total RNA" is amended by the replacement as follows:

--Total RNA was isolated with the Qiagen [Rneasy] RNAEASY kit.--

Page 108, line 16, the sentence beginning "After the injection", is amended by the replacement as follows:

--After the injection, the knee incision is closed with [Nexabond] NEXABOND (Veterinary Products Laboratory).--

Page 110, line 33, through page 111, line 6, the sentence beginning "An *ex vivo* therapy", is amended by the replacement as follows:

--An *ex vivo* therapy is similar to a protocol described for intra-articular transplantation of autologous synoviocytes retrovirally transduced to synthesize interleukin-1 receptor antagonist (Evan, Christopher et. al., Clinical Trial to Assess the Safety, Feasibility, and Efficacy of Transferring a Potentially Anti-Arthritic Cytokine Gene to Human Joints with Rheumatoid Arthritis, [Human Gene Therapy] Human Gene Therapy, Vol. 7, 1261-1280).--

Below are the marked up amended claim(s):

87. (Amended) A method for expressing a chimeric CD40 ligand in a CD40+ human cell, wherein the chimeric CD40 ligand includes one or more human domains derived from a human CD40 ligand gene and one or more murine domains derived from a murine CD40 ligand gene, the method comprising introducing a chimeric polynucleotide encoding the chimeric CD40 ligand into the cell.[that expresses a CD40 ligand receptor, comprising introducing a nucleic acid sequence encoding a non-human CD40 ligand into the cell.]

93. (Amended) The method of claim [92] 87 wherein the murine [CD40 ligand] domain [or subdomain] comprises an [murine CD40 ligand] extracellular CD40 ligand domain.

94. The method of claim 87 [92] wherein the murine CD40 ligand domain [or subdomain] comprises Domain III [, or a subdomain of Domain III,] of the murine CD40 ligand.

95. (Amended) The method of claim [92] 93 wherein the extracellular [murine CD40 ligand] domain [or subdomain comprises] consists of Domain IV. [, or a subdomain of Domain IV, of the murine CD40 ligand.]

97. The method of claim 87 [92] wherein the murine CD40 ligand [comprises] consists of Domain I [, or a subdomain of Domain I,] of the murine CD40 ligand.

98. The method of claim 87 [92] wherein the murine CD40 ligand [comprises] consists of Domain II [, or a subdomain of Domain II,] of the murine CD40 ligand.

99. (Amended) The method of claim [92] 87 wherein the chimeric polynucleotide consists of the nucleic acid sequence [comprises] of SEQ ID NO. 3. [, SEQ ID NO. 4, SEQ ID NO. 5, SEQ ID NO. 6, SEQ ID NO. 7 or SEQ ID NO. 20.]

100. The method of claim 87 [99] wherein the chimeric polynucleotide consists of the nucleic acid sequence of [comprises] SEQ ID NO. 20.

111. (Amended) The method of claim[s] 87 [89, 90, 103, 108, 137 or 138], wherein the human $CD40^{+}$ cell comprises a [human] neoplastic cell [that is CD40+].

113. (Amended) The method of claim 111, wherein the neoplastic cell comprises a neoplastic B cell.

116. (Amended) The method of claim 111 wherein the neoplastic cell comprises a neoplastic T cell.

141. (New) The method of claim 87 wherein the chimeric polynucleotide consists of the nucleic acid sequence of SEQ ID NO. 4.

142. (New) The method of claim 87 wherein the chimeric polynucleotide consists of the nucleic acid sequence of SEQ ID NO. 5.

143. (New) The method of claim 87 wherein the chimeric polynucleotide consists of the nucleic acid sequence of SEQ ID NO. 6.

144. (New) The method of claim 87 wherein the chimeric polynucleotide consists of the nucleic acid sequence of SEQ ID NO. 7.

Atty. Dkt. No. 041673-2069

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomas J. Kipps

Title: NOVEL EXPRESSION VECTORS CONTAINING ACCESSORY MOLECULE LIGAND GENES AND THEIR USE FOR IMMUNOMODULATION AND TREATMENT OF MALIGNANCIES AND AUTOIMMUNE DISEASE

CERTIFICATE OF FACSIMILE TRANSMISSION
I hereby certify that this paper is being facsimile transmitted to the United States Patent and Trademark Office, Washington, D.C. on the date below.

Michelle Sympson
(Printed Name)

Michelle Sympson
(Signature)

February 11, 2003
(Date of Deposit)

Appl. No.: 08/982,272

Filing Date: 12/01/1997

Examiner: Phillip Gambel

Art Unit: 1644

AMENDMENT TRANSMITTAL

Commissioner for Patents
Box NON-FEE AMENDMENT
Washington, D.C. 20231

Sir:

Transmitted herewith is an amendment in the above-identified application.

[X] Small Entity status under 37 C.F.R. § 1.9 and § 1.27 has been established by a Small Entity statement previously submitted.

[X] The fee required for additional claims is calculated below:

	Claims as Amended		Previously Paid For		Extra Claims Present		Rate		Additional Claims Fee
Total Claims:	15	–	50	=	0	x	$18.00	=	$0.00
Independents:	1	–	7	=	0	x	$84.00	=	$0.00
First presentation of any Multiple Dependent Claims:						+	$280.00	=	$0.00
							CLAIMS FEE TOTAL:	=	$0.00

Atty. Dkt. No. 041673-2069

[X] The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-0872. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-0872.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

Date 2-10-03

By Stacy L. Taylor

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